

Face Anti-Spoofing in Practical Scenarios

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ABSTRACT

Face recognition has become very popular as a convenient biometric for identity verification in recent years. The presentation attack is a serious threat hindering the application of face recognition systems. Face presentation attack detection (PAD) is an essential anti-spoofing measure to enhance the security of face recognition systems by discriminating presentation attacks from bona fide attempts. However, existing methods have achieved good performance in intra-domain testing but not in a new target domain. In this talk, we introduce Asymmetric Modality Translation for Face Presentation Attack Detection to improve generalization capability. We also propose the One-Class Knowledge Distillation for Face Presentation Attack Detection by using only Bona-Fide (one-class) example to efficiently fine-tune a model in the target domain. We also propose Rehearsal-Free Domain Continual Face Anti-Spoofing to continually fine-tune a pre-trained model to tackle continuous challenges of different domain data.

BIOGRAPHY

Prof. Alex Kot has been with the Nanyang Technological University, Singapore since 1991. He was Head of the Division of Information Engineering and Vice Dean Research at the School of Electrical and Electronic Engineering. Subsequently, he served as Associate Dean for College of Engineering for eight years. He is currently Professor and Director of Rapid-Rich Object SEArch (ROSE) Lab and NTU-PKU Joint Research Institute. He has published extensively in the areas of signal processing, biometrics, image forensics and security, and computer vision and machine learning. Dr. Kot served as Associate Editor for more than ten journals, mostly for IEEE transactions. He served the IEEE SP Society in various capacities such as the General Co-Chair for the 2004 IEEE International Conference on Image Processing and the Vice-President for the IEEE Signal Processing Society. He received the Best Teacher of the Year Award and is a co-author for several Best Paper Awards including ICPR, IEEE WIFS and IWDW, CVPR Precognition Workshop and VCIP. He was elected as the IEEE Distinguished Lecturer for the Signal Processing Society and the Circuits and Systems Society. He is a life Fellow of IEEE, and a Fellow of Academy of Engineering, Singapore.

All are welcome!



In case of questions, please contact Prof. Shiqi Wang at shiqwang@cityu.edu.hk, or visit the CS Departmental Seminar Web at <https://www.cs.cityu.edu.hk/events/cs-seminars/recent-cs-colloquia>.